



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,616	02/28/2002	Deepak S. Turaga	020003	7072

7590 09/19/2006

Jonathan C. Parks, Esquire
Kirkpatrick & Lockhart, LLP
Henry W. Oliver Building
535 Smithfield Street
Pittsburgh, PA 15222-2312

EXAMINER

REKSTAD, ERICK J

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/085,616

Applicant(s)

TURAGA ET AL.

Examiner

Erick Rekstad

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3,4,7-14,19 and 20 is/are allowed.
- 6) ☒ Claim(s) 1,2, 5, 6, and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is a Final Rejection for application no. 10/085,616 in response to the amendment filed on March 30, 2006 wherein claims 1-20 are presented for examination.

Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2, 5, 6, and 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by 'A Self-Governing Rate Buffer Control Strategy for Pseudoconstant Bit Rate Video Coding' by Chen et al.
[claims 1, 2, 15, 16, and 18]

Chen teaches a method and system for making a mode decision in video coding comprising:

Collecting a first portion of video data (intraframe);

Labeling the first portion of video data with an optimal mode (quantizer);

Identifying at least one feature of the first portion of video data
corresponding to the optimal mode (INTRABITS);

Constructing a probabilistic model based on the at least one identified feature (EB_i); and

Making a mode decision for a second portion of the video data based on an application of the probabilistic model to the second portion of the video (equations 4 and 5) (Section: III Self-Governing Rate Buffer Control Strategy. Pages 53-55).

As required by claim 2, Chen teaches the collecting a first portion of video data includes collecting a sample of the video data (a first frame of the current GOP).

[claim 5]

As shown by equation 5, Chen teaches the calculating a likelihood ratio for a unit of the second portion of the video using a value of the feature. Then a quantizer is selected to be true and made the mode for the second portion (SGOP), as shown by equation 4 (Page 54-55).

[claims 6 and 17]

The quantizer mode selection has a direct relationship with if the frame is skipped or coded as Chen teaches the system contains an Underflow and Overflow-Alter State. This Alter State is triggered on a quantizer allowing the encoder to provided too many bits or not enough bits where in the system will opt not to code any data in an overflow state (Section: Underflow and Overflow-Alert. Page 55).

Allowable Subject Matter

Claims 3-4, 7-14, 19 and 20 are allowed.

Art Unit: 2621

The following is a statement of reasons for the indication of allowable subject matter:

The claims are allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose a method or apparatus for coding wherein in the coding is based on the identifying a feature by defining at least one training feature vector and its cost relating to a unit of the first portion of video data and defining a training feature space containing the feature vector.

The closest prior art as shown above teaches the requirements of a method of making mode decisions but fails to particularly teach the specific method of identifying a feature as claimed. This feature taken with the others in the claims overcome the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 571-272-7338. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Erick Rekstad
Examiner
AU 2621
(571) 272-7338
erick.rekstad@uspto.gov




MEHRDAD DASTOURI
SUPERVISORY PATENT EXAMINER
TC 2600